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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,161

06/19/2008

Jose Antonio Almeida Neto

01952.0076

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04/27/2011

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EXAMINER

SANDERS, JAMES M

ART UNIT

PAPER NUMBER

1743

MAIL DATE

DELIVERY MODE

04/27/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,161	Applicant(s) ALMEIDA NETO, JOSE ANTONIO	
	Examiner JAMES SANDERS	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 3-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 March 2011 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a final Office action in response to a non-final Office action reply filed 3/7/11 in which claims 1 and 2 were amended.

Specification

1. The abstract of the disclosure is objected to because of the following informality: line 6 recites “the first and mixtures” which appears to a misstatement of “the first and second mixtures”.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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3. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolan et al (US 6220256, already of record) in view of Yeung (US 5415939, already of record) and further in view of Rogers (US 3303252).

Dolan et al teach a process for manufacturing a PTFE filament that includes extrusion of a billet of PTFE (col 12 Ins 65-67), and, subsequently, stretching, heating (col 13 Ins 6-10) and cutting PTFE to form a PTFE filament (col 13 Ins 16-19). Dolan et al further teach a bilayer construction A/B (col 13 Ins 37-38) in which fumed silica is added to at least one of the layers - A (col 3 Ins 62-64, col 11 Ins 38-42) which increases surface friction (col 10 Ins 62-63), and it is inherent that the mixtures for layers A and B would then have different coefficients of friction. Though different than the claimed invention, Dolan also teaches laminating the layers together (col 13 Ins 11-14).

Dolan et al do not teach the following steps prior to extrusion: providing a receptacle having rigid side-walls, feeding a first mixture containing PTFE and a filler in one portion, and a second mixture containing PTFE in a second portion, inside the receptacle, side by side and aligned with the side walls; and pressing the first and second mixtures in a direction parallel to the side walls to form a billet; wherein the first mixture includes a pigment and the second mixture includes another pigment.

However, in the same field of endeavor pertaining to manufacturing extruded PTFE products, Yeung teaches providing a receptacle inherently having rigid side-walls; feeding a first mixture containing PTFE and a filler in one portion, and a second mixture containing PTFE in a second portion, inside the receptacle, side by side and aligned

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with the side walls; and pressing the first and second mixtures in a direction parallel to the side walls to form a billet (col 3 lns 26-37). Yeung further teaches the first mixture includes a pigment and the second mixture includes a different pigment (col 3 lns 21-25). Though different than the claimed invention, Yeung also teaches using a removable mandrel in the feeding (col 3 lns 26-33) and coextruding the composite preform (col 3 lns 10-19).

Accordingly, the prior art references teach that it is known that coextruding a composite preform and lamination are functional equivalents for providing a bilayer construction.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Yeung with those of Dolan et al by substituting the compositing technique of Yeung for the lamination technique of Dolan et al. The substitution would have resulted in the predictable result of providing a bilayer construction and extrusion makes possible more complete control of product characteristics as suggested by Yeung (col 2 lns 22-23).

The previous combination does not teach that in the feeding, the first and the second mixtures are inserted respectively into two portions of the recipient separated by a barrier, and, subsequently, the barrier is removed, enabling a part of the first mixture to contact a part of the second, and be arranged side by side and aligned with the side walls of the recipient.

However, in the same field of endeavor pertaining to extruding PTFE, Rogers teaches that in the feeding, the first and the second mixtures are inserted respectively

into two portions of the recipient separated by a barrier, and, subsequently, the barrier is removed, enabling a part of the first mixture to contact a part of the second, and be arranged side by side and aligned with the side walls of the receptacle (col 1 lns 25-31).

Accordingly, the prior art references teach that it is known that a removable divider and a removable mandrel are functional equivalents for arranging the mixtures.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Rogers with those of the previous combination by substituting the filling technique employing a removable divider of Rogers for the filling technique employing a removable mandrel of the previous combination for appropriately dimensioned preforms. The substitution would have resulted in the predictable result of arranging the mixtures side by side and aligned with the side walls of the receptacle.

Response to Arguments

Applicant's arguments filed 3/7/11 were fully considered and are not persuasive.

First, Applicant asserts that while the preform 1 of Yeung may look like the billet 5 of the invention, as shown in Fig. 5 it is clear from the reference that it is made by quite a different process.

In response, Examiner points out that Yeung teaches providing a receptacle inherently having rigid side-walls; feeding a first mixture containing PTFE and a filler in one portion, and a second mixture containing PTFE in a second portion, inside the receptacle, side by side and aligned with the side walls; and pressing the first and second mixtures in a direction parallel to the side walls to form a billet so that when

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Yeung is combined with the other references of the claim 1 rejection, the combination teaches a process quite similar to the claimed invention.

Next, Applicant asserts that Rogers, in column 1, lines 31-35, teaches that the method cited is no longer satisfactory for its intended purpose, and consequently, it is highly unlikely that one skilled in the art would have considered this an alternative to the process described in Yeung for forming a preform for extruding a PTFE filament.

Examiner, however, points out that Rogers teaches the method is satisfactory for other than longer preforms (col 1 lns 31-36) and since Yeung is not limited to forming longer preforms, one of ordinary skill would have considered this an alternative to the process described in Yeung for forming a preform for extruding a PTFE filament.

Finally, Applicant asserts that the teachings of Rogers and Yeung are not "functional equivalents" because it is clear Yeung requires mandrels in the method described, but if the method is to be replaced by the filling technique of Rogers as argued by the Examiner, then the mandrels would be eliminated as would the step-wise compacting of the mixtures as required by Yeung and therefore substituting the filling technique of Rogers for the filling technique of Yeung would alter the principle of operation of Yeung's invention, so it is not proper to make this substitution.

Examiner, however, maintains that a removable divider and a removable mandrel are functional equivalents for arranging the mixtures and it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Rogers with those of the Dolan et al/Yeung by substituting the filling

technique employing a removable divider of Rogers for the filling technique employing a removable mandrel of the previous combination for appropriately dimensioned preforms. The substitution would have resulted in the predictable result of arranging the mixtures side by side and aligned with the side walls of the receptacle. Further, regarding compacting, the mixtures would be compacted after removal of the divider and compacted to a degree still sufficient to be consistent with Yeung's operation.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES SANDERS whose telephone number is 571-270-7007. The examiner can normally be reached on Monday through Friday, 8 AM to 5 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Del Sole can be reached on 571-272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMS

/Joseph S. Del Sole/

Supervisory Patent Examiner, Art Unit 1743